

Claims

- [c1] A method of eliciting an antitumor effect in vivo comprising the steps of:
identifying a species representative of a treatment subject;
identifying at least one nucleic acid sequence non-native to the species;
introducing the at least one nucleic acid to at least one tumor in the treatment subject; and
applying an energy source to the at least one nucleic acid.
- [c2] The method of claim 1 wherein the energy source comprises electrical output.
- [c3] The method of claim 1 wherein the energy source comprises sonic output.
- [c4] The method of claim 1 wherein the energy source comprises photonic output.
- [c5] The method of claim 1 wherein the energy source comprises microwave output.
- [c6] The method of claim 1 wherein the energy source is adapted to make at least one cell in the at least one tumor.
- [c7] The method of claim 6 wherein the energy source is electrical and applied in a strength between 100 to 5,000 volts per centimeter.
- [c8] The method of claim 6 wherein the energy source emits a plurality of electrical pulses to achieve cell permeability.
- [c9] The method of claim 1 wherein the step of introducing the at least one nucleic acid to at least one tumor in the treatment subject comprises injecting the nucleic acid into extracellular space coincident to the at least one tumor.
- [c10] The method of claim 1 wherein the step of introducing the at least one nucleic acid to at least one tumor in the treatment subject comprises jet injecting the nucleic acid into extracellular space coincident to the at least one tumor.
- [c11] The method of claim 1 further comprising the step of substantially simultaneously introducing a second nucleic acid sequence that codes for a therapeutic molecule.